Appendix D

Overview

The goals of the project delivery process are:

- To get a project delivered so it can be bid through DOTD with Federal Funds and
- To produce good plans that will be on schedule or completed faster and avoid revisions and/or withdrawals

To successfully reach the goals, the LPAs & their consultants must:

- Understand and comply with the DOTD project delivery process to complete the bid package
- Plan for and allocate sufficient local resources to oversee the project in plan development
- Plan for and allocate sufficient local resources to complete the plan delivery process
- Produce and submit good/complete plans
- Minimize plan delays and avoid revisions and/or withdrawals
- Reduce change orders and project delays

DOTD Design Phases

A. Planning/Feasibility – Stage 0, (Phase 1)
B. Preliminary Engineering for Project Development and Environmental Studies – Stage 1, (Phase 2)
C. Funding – Stage 2 (N/A to LPA projects)
D. Right of Way Acquisition – Stage 3, (Phase 3)
E. Utility Relocation – Stage 3, (Phase 4)
F. Design – Stage 3, (Phase 5)
G. Construction – Stage 5, (Phase 6)

*NOTE: *Stages* refer to project development and the Project Development Manual. *Phases* refer to the funding.

All phases must conform to Federal Law if Federal Funds are used for ANY phase. The LPA should carefully consider the procedures required by the funding types for each phase of project development when developing project schedules. *Example*: Using

Federal funds in any phase may require additional work or activities in prior work phases or require certain commitments or compliance in later work phases. The documentation required for the authorization of federal funds varies by work phase. A written Notice to Proceed (NTP) is required from the Project Manager to begin any reimbursable phase of a project.

Time Requirements

Each project must be processed through the required milestone submittals. The DOTD reviews and provided comments on the submittals. For a LPA to expedite the processing time it is recommended that a response be provided to each comment in writing. (Reference Appendix D-5)

Project Set-up Meeting

This meeting is STRONGLY encouraged prior to beginning the design phase of the project. This meeting is set with the DOTD project manager and the LPA responsible charge and will allow the DOTD PM and the LPA responsible charge to meet and discuss the project. Their agenda will include the following:

1. A discussion on the scope of services, schedule, budget and expectations that would be required if the DOTD selects their consultant.
2. If the LPA selects the consultant, help and guidance on what is needed selecting a consultant for DOTD plan development
3. Full size plans vs. letter size plans
4. The requirements for survey
5. Other plan development related issues
6. The project manager and the LPA meet and formulate a plan of action for succinctly getting the project to letting

Consultant Selection for Design Services

If 100% Local Funds are used for Preliminary Engineering (Design Engineering) on their local route, the LPA may choose one of the following:

- LPA performs work in-house

- LPA selects their own consultant to help with work using state procurement laws. (Exception: The consultant cannot be on the DOTD disqualified or debarred list)

  TIPS: When negotiating a contract:
  - All work will be performed in accordance with the DOTD's Standards and Procedures (not local policies)
  - DOTD bids all construction projects; therefore, DOTD requirements (policies, procedures, schedules, milestone submittals, and deliverables) required to bid the project must be considered when developing the consultant contract scope and fee. This includes reasonable review time by DOTD which is dependent on the size and complexity of the project.
  - For Construction Engineering & Inspection Contracts:
    - Inspectors may only inspect activities in which they hold an active DOTD certification. The major activities below require certified inspectors.
      a) Asphaltic Concrete Plant
      b) Asphaltic Concrete Paving
      c) Embankment and Base Course
      d) Portland Cement Concrete Paving
      e) Structural Concrete
    - The Consultant Office Manager must satisfy the following minimum requirements:
      a. Training in Site Manager
      b. Training in DOTD Construction Contract Administration
    - WORK ZONE TRAINING REQUIREMENTS
      All project personnel (engineers, engineer interns, and field personnel, *excluding Asphalt Plant Inspector and Office Manager) listed in the staffing plan for the project shall have completed the appropriate work zone training courses at the time of submittal. Specific requirements are:
      - Engineers (field and office):
        - Flagger
        - Traffic Control Technician
        - Traffic Control Supervisor
      - Engineer Interns:
        - Flagger
        - Traffic Control Technician
        - Traffic Control Supervisor
      - Field Inspectors:
        - Flagger
        - Traffic Control Technician
      - Field Senior Technicians:

  - Flagger
  - Traffic Control Technician
  - Traffic Control Supervisor
- Approved courses are offered by ATSSA and AGC. Substitutes for these courses must be approved by the DOTD Work Zone Task Force. The "DOTD Maintenance Basic Flagging Procedures Workshop" is not an acceptable substitute for the ATSSA and AGC flagging courses.

If Federal Funds are used for Preliminary Engineering (with Local and/or State match)

- FHWA requires DOTD to **facilitate** the consultant selection, advertising and bidding for LPAs to use Federal funds as stated in the Entity-State Agreement

- DOTD advertises and selects a consultant for the LPA. DOTD's procedures for both of these activities have been previously approved by FHWA; meeting all Federal requirements. The Federal guidelines require following the Brooks Act.
  - *The Brooks Act – USC 40 Ch 11* - The federal Brooks Act requires agencies to promote open competition by advertising, ranking, selecting, and negotiating contracts based on demonstrated **competence and qualifications** for the type of engineering and design services being procured, and at a fair and reasonable price.
  - LA State Law procurement requirements for professional services do NOT meet the Brooks Act

NOTE: The LPA signs the formal contracts with the consulting engineer and the contractor. DOTD is not a party to the contract.

If project is on a state route, DOTD will hold all contracts. The LPA will provide any money to completely fund or match the Federal funds for engineering or construction.

LPA Responsibilities if Federal funds are used for pre-construction

- Submits the project scope of services & man-hours per program requirements to DOTD
- Provides the project schedule & budget (must be realistic) (may have help from a consultant)
- Executes the consultant contract prepared by DOTD. (The DOTD PM has less ability to rush a project if the LPA does not execute the project quickly. The Responsible Charge should let the PM know if they are being delayed i.e. if the council meeting is not imminent.)
- Reviews, approves & transmits invoices to the DOTD

- Monitors the contract time & notifies DOTD of any extensions / suspensions

DOTD Responsibilities if Federal funds are used for pre-construction

- Reviews the scope & man-hours
- Reviews schedule and budget
- Prepares & advertises the contract
- Selects the consultant with input from the LPA (depending on the program)
- Prepares the consultant contract for execution by the LPA with the consultant
- Processes & pays invoices

Invoices

Invoices submitted to DOTD for reimbursement or disbursement for an engineering contract must be in format found on the DOTD Consultant Contract Services website. Invoices should be submitted to the project manager monthly.

Predesign Meeting

This meeting identifies the components, issues, and concerns of the project prior to beginning design. This form is located on DOTD's internet (reference Appendix D-5). The invitee list could include: the DOTD PM, DOTD representative from the Real Estate Section, Environmental Section Traffic Engineering Section, Road Design Section, Bridge Design Section, Railroad Section, Utility Relocation Section, the District representation, and the LPA Responsible Charge with their designer or consultant. Topics discussed at the meeting include:

Right-of-way information – minimal amount required, relocations, who will perform property surveys and right-of-way maps, funding

Environmental – Type of process, known issues, types of permits, and types of agreements

Traffic – Detours, sequence of construction, night construction

Road Design – Design speed, posted speed, existing pavement condition/width, design section/lanes/width/type of shoulder etc., sidewalks, bike paths, anticipated design exceptions, landscaping

Bridge Design – Design speed, design highwater, navigable stream, navigation clearance, fenders, navigational lights, hydraulic frequency & study, controlling grade, vertical clearance, horizontal clearance, type of bridge, channel changes, sidewalks, roadway lighting, bridge borings

Signalization – New, modification, or temporary, who will provide plans

Railroad – Crossing within 200 ft., highway over or under RR is reconstructed or modified, drainage structure under RR modified, RR agreement required

Utility Relocation – Affected utilities, major utilities affected, sewer line affected (gravity or force), sewer effluent dumped into ditches, major pipeline crossings

A sample agenda would include:

1. Discussion of Scope, Schedule and Budget
2. Consultant requirements
3. Plan development expectations (reviews)
4. Environmental (NEPA) requirements
5. Right-of-Way

Environmental NEPA (Stage 1)

The National Environmental Policy Act (NEPA) is federal legislation passed by Congress in 1969 that calls for the examination and consideration of the proposed action on sensitive resources for all federally-funded actions

“The National Environmental Policy Act (NEPA) is the basic national charter for protection of the environment” 40 CFR 1500.1(a)

“NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken.” 40 CFR 1500.1(b)

Basic NEPA Process (Stage 1) - *See DOTD Stage 1 Manual of Standard Practice* (Reference Appendix D-5 for link).

1. Identify the Problem and Need for a project
2. Develop Alternatives that solve the problem and meet the needs
3. Evaluate the effects of the alternatives on the natural and human environments with input from agencies and communities
4. Make a decision on the preferred alternative
5. Document the process

The level of analysis and type of documentation is dependent on the project complexity and potential impacts. The context (area of the project setting) and the impact intensity affect the significance of a project. Each project must be reviewed on its own merits. It can be the same type of project in different locations and have different levels of potential impacts.

Consideration of Impact Intensity (from NEPA and the Transportation Decision Making Process 2011)

- Adverse and beneficial considered
- Public health or safety involved
- Unique or unusual area of setting
- High degree of public controversy
- Uncertainty or precedent set
- Are there land use changes? Relocations?
- Are there historic properties or parklands?
- Will effects to Threatened or Endangered Species occur?
- Are there know and substantial cumulative impacts?

Programmatic Categorical Exclusion (PCE) is an action that based on past experience has shown to never or almost never cause significant environmental impacts and can "programmatically" be classified as a Categorical Exclusion.

- Estimated time for clearance – 2-4 weeks (typical from start to finish)
- No complexity (wetlands, historic, coordination)
- Otherwise like CE
- Examples: Installation of signs, new pavement markings,

Categorical Exclusion (CE) is a NEPA classification given to federal-aid projects for a category of actions that do not individually or cumulatively have a significant effect on the human environment, either individually or cumulatively. NEPA requirements are satisfied once a categorical exclusion is approved for a project

- Estimated time for clearance - 4 months (typical from start to finish)
- Longer if there are issues
- Examples: Overlay, minor bridge, hiking trails, no right-of-way

Environmental Assessment (EA) is a document prepared in compliance with NEPA for projects in which the significance of the social, economic, and environmental impacts are not clearly established or are anticipated to be significant.

- The estimated time for clearance for an EA is 12 to 18 months.
- Examples: New interstate interchange widening existing 2-lane highway to 4-lanes New bridge over navigable waterway

Finding of No Significant Impact (FONSI) is a document which briefly presents why an action does not have a significant impact. It includes or references the environmental assessment.

Environmental Impact Statement (EIS) is a document prepared in compliance with NEPA when impacts from a project are anticipated to be significant.

- The estimated time for clearance for an EIS is 3 or more years to complete.
- Examples New interstate facility (i-69, I-49 North/South) New interstate bridge over the Calcasieu River New 80 mile loop around Baton Rouge

Working with DOTD through the environmental process:

- DOTD determines type of document required
- DOTD determines who will prepare document and acquire environmental permits
- Document preparation, includes Solicitation of Views (SOVs)
- DOTD processes and submits document to FHWA (non – PCEs)
- Applicant obtains required environmental permits (time sensitive) and submits to PM

Probable Types of NEPA Documents

Program	PCE	CE	EA	EIS
Safe Routes to Schools	√			
Local Road Safety Program	√			
Transportation Alternatives	√	√		
Urban Systems	√	√	√	
Large Projects			√	√

Solicitation of Views (SOV)

Purpose: To inform interested agencies, officials, and public of the proposed project and allow 30 days for comment.

Background - Early coordination with appropriate local, state, and federal agencies is accomplished by solicitation of views to assist in the identification of reasonable alternatives and the evaluation of the social, economic, and environmental impacts of any proposed action and measures to mitigate adverse impacts which result from that action.
SOVs are done as early as possible in the environmental process for projects other than for minor federally-funded and state-funded projects such as overlays, turn lanes, signage, etc. Recipients are asked to provide comments within 30 days.

Views are solicited for federally-funded: Categorical Exclusions upon receipt of preliminary plans or comparable project information (except for some minor projects such as scour repairs, ferry boat repairs, etc.); Environmental Assessments (EA) upon receipt of approved Feasibility Study and initiation of environmental process; and Environmental Impact Statements (EIS) after publication of Notice of Intent in the Federal Register.

Solicitation of Views (SOV) should include:

- Cover letter explaining why views are being solicited and a date for recipients' comments
- Preliminary project description
- Vicinity map showing the location of the proposed project

SOV mailing lists are comprised of lists of various federal, state, and local agencies and officials which are maintained by DOTD Environmental Section. The state list of federal and state agencies and officials includes those with jurisdiction statewide. The parish lists of federal, state, and local agencies and officials include those with jurisdiction within the applicable parish. Upon request, any group or individual can be included on a list. SOVs should be sent to all contacts on the State list as well as Parish(es) in which the proposed project is located.

Responses are required from

- US Army Corps of Engineers

- US Fish and Wildlife Services
- State Historic Preservation Officer (SHPO)
- Parish Floodplain Administrator (designated by FEMA)

Environmental Clearance Facts

- Environmental clearance must be updated after 3 years and may require a re-evaluation if changes are made to the project.
- NEPA documents should identify which permits will be required for a project
- Don't send NEPA documents directly to FHWA without going through DOTD
- Native American Tribe coordination – Tribal consultation may be needed as part of NEPA documentation. Some tribes insist on government to government contact (Federal government only – not state or local)
- State Historic Preservation Office (SHPO), US Fish and Wildlife Services (USFWS) and National Marine Fisheries Services (NMFS) are resources agencies and coordination may be needed for the NEPA documentation and obtaining permits

Federal Aid Essentials Videos for Environment - Agencies are required to consider the environmental effects of their proposals and actions in Federal-aid project delivery. The FHWA has developed general videos to help an LPA understand the environmental process. Five videos on the environmental process are available. They are: the "Overview of NEPA as Applied to Transportation Projects", "Documentation and the Environmental Process", "NEPA Compliance and Class of Actions", "Categorical Exclusion", and the "Environmental Impact Statement".

Environmental Clearance/Permit Facts

- Imperative to have most current and accurate information for permitting
  - Permit expiration dates vary. Look for "Commence by"
  - One extension, then reapply if project not started
  - Expiration date(s) vary by agency/permit - 2 - 5 years typical
  - NEPA documents should identify which permits will be required for a project

Cultural resources permit is only done through the Federal Agency or their delegate (DOTD). The LPA should NOT send anything directly to State Historic Preservation Office (SHPO). Section 106 applies to all Federal projects. There is a 30 day processing time. The LPA should not correspond directly to SHPO. Information should be sent to the lead state agency (DOTD or another state agency if they are Federal-Aid pass through agency).

COE Nationwide permit typically requires 45 to 90 days. It includes Water Quality Certification. A few are already issued and don't need a letter. It often requires mitigation.

COE individual permit (404) requires 30 day or longer for public notice by USACE. Water Quality Certification (WQC) typically has a fee of $33/LPA. It requires adjacent property owner addresses. The typical time to receive the permit is 4 - 8 months. Mitigation costs may be required.

Coastal Zone – The Coastal Use Permit (CUP) has an on-line application. (DNR) It requires a 30 day public notice and the addresses of adjacent property owners. The quantities for excavation and embankment are needed. There is typically a $100 fee plus 5¢ per CY excavation/fill except native material. The USACE will not issue a permit without an approved CUP.

Navigable Waterway permit is issued by the United States Coast Guard (USCG). It requires property owner addresses within a half mile radius. It requires a 30 day public notice and takes approximately 2 - 6 months process time. The USCG will not be issued until all other required permits have been issued.

National Pollutant Discharge Elimination System (NPDES) or Louisiana Pollution Discharge Elimination Systems (LPDES) Construction Permits
Levee District permits are required within 1500' of levee. The Levee District Permit timeline varies. They require 30 days or longer for public notice. The USACE will not issue other permits until Levee permit obtained

Coordination with US Fish and Wildlife Services or National Marine Fisheries (NMF) – They are the Federal Agency that is responsible for Threatened and Endangered Species coordination and must delegate that responsibility to the LPA. The LPA can contact these agencies and keep DOTD informed, but formal coordination needs to be handled by DOTD

Scenic Streams

Actions Worked Concurrently with Plan Development

While the design plans are being developed, there are other actions which are time consuming, but can be worked concurrently with plan development. Some of these actions include acquiring any railroad agreements, right-of-way and/or utility

agreements. Other actions are securing environmental permits, creating Non-Standard (NS) pay items including specification submittals for unique items, and working for approval of design waiver/design exception requests.

The PMs must complete the "Federal Authorization Funding Request" form before a the PS&E package can be submitted to the DOTD Chief Engineer for signature. They are required to provide the status for each permit and agreement listed below (Not applicable (NA), no information (NI), required (REQ), submitted (SUB) or approved (APP). If Required (REQ) and not Approved (APP), then the project is not ready for federal authorization:

- RR (Railroad)
- COE (Corps of Engineers)
- CG (Coast Guard)
- CGN (Coast Guard Navigable)
- WQC (Water Quality Cert.)
- CUP (Coastal Use Permit)
- SSP (Scenic Stream Permit)
- LEV (Levee District Permit)

eview, the plans are discussed by sheet. Issues are identified to review in the field.

Right-of-Way Maps, Joint Plan Review Meeting

Right-of-Way Maps

Issues

1. No property should be acquired prior to Right-of-Way (R/W) Maps being reviewed. ***Problem***: Right-of-Way Maps are sent after the property has been acquired for review by DOTD

2. No property should be acquired prior to Right-of-Way Map approval. ***Problem***: Purchase of property with incomplete maps. LPAs cannot acquire property until maps are accepted as complete by DOTD. LPAs must wait for letter from DOTD to proceed with acquisition.

3. **All** R/W maps need to be submitted to DOTD at 60% preliminary plans for Joint Plan Review (JPR) whether or not federal reimbursement is sought for acquisition.

4. Every project that requires right-of-way must have a Joint Plan Review.
5. The Location and Survey Section notifies the DOTD Project Manager when the JPR can be scheduled
6. Right-of-way maps must match the design plans. If changes are made to the design plans they **must** be reflected on the right-of-way maps.
7. Limits of construction **must** be within required right-of-way or servitude.
8. Revisions to the R/W maps must be made according to the standards. See Location and Survey Manual – Addendum "A". For questions contact the DOTD Location and Survey Section.
9. There can only be one original set of right-of-way maps. When right-of-way maps are revised, a complete revision history is required on the sheet. Multiple originals are **not** permitted.
10. Apparent Right-of-Way is not acceptable. Existing Right-of-Way must be verified through documentation or survey.
11. Separate clearing and grubbing project procedure – Original right-of-way maps are placed in the clearing and grubbing plans. A duplicate copy shall be inserted in the construction plans and labeled "For Information Purposes Only". The right-of-way taking lines in the construction plans will remain labeled as "Required Right-of-Way".
12. Legal descriptions and a CogoWin ".IN" file are required for all state route parcels located on the DOTD Location & Survey website under manuals and forms.

COMMON MISTAKES ON RIGHT OF WAY MAPS

A. Project Information (beginning and ending stations, State Project and F.A.P. numbers)
    a. Not in concurrence with Construction Plans.
    b. Not in concurrence on Title Sheet, body of map or Residual Sheets.
    c. Not shown in standard manner and with left margin.

B. Control Section alignments (centerlines) not in concurrence with Construction Plans.

C. Failure to show Equations on the R/W map that are given on the construction plans or equations shown on map that are not in concurrence with Construction plans.

D. Ties
    a. Failure to show station offsets at all breaks in Req'd R/W or Station offset data of required R/W that is not in concurrence with Construction data.
    b. Parcel ties not in correct form. Parcels must be tied on an extension of their bearings, using dashed lines with dimension arrows.
    c. Existing R/W ties of intersecting streets not in correct form. These also must be tied on a skew as above.
    d. Insufficient ties where Existing R/W intersects the Centerline (CL). In addition, the following must be shown:
        1. A station at the intersection of Existing and CL
        2. A Station offset at the next or preceding bearing break.
        3. A distance and bearing between those two.

E. Title information (Job Name, Route, Parish, State Project numbers) on Title Sheet and Title Blocks that is not in concurrence.

F. Failure to show Y and X coordinates at the beginning and end of the job, at critical curve data coordinates (point of curvatures (PC's), point of intersections (PI's), point of tangent (PT's)) and at beginning and end of each sheet.

G. Acquisition Block:
    a. Parcel numbers not in ascending order.
    b. Acquisition data not in tabular form.

H. Failure to match owners' names throughout entirety of map. Frequent spelling errors, parts of names omitted, etc.

I. Failure to indicate continuous ownership with Land Hooks on lot lines and on Section lines where relevant.

J. Failure to dimension from CL to required R/W (at ends of sheets) if they are parallel.

K. Section Lines:
    a. Using Section Line symbology alone to show a property boundary between diverse owners. (A property line consistent with other property lines must be shown. Heavy weight section lines can be indicated over a portion of the property line)

b. Failure to differentiate Section Line symbology from lot lines. (Section lines should be extended heavyweight dashes as opposed to lot line's short lightweight dashes.)

L. Scale of residual maps too large to accommodate complete outline of properties.

M. Omissions in residual maps such as incomplete centerline and project information, owners' names and R.A.'s

N. Maps congested with unnecessary lines that obstruct text and arrows.

O. Leader lines are overlapping and confusing.

P. Lettering through lines.

Joint Plan Review (JPR)

A set of preliminary right-of-way plans is required prior to the plan-in-hand inspection. After the plan-in-hand inspection, the project manager schedules a Joint Plan Review meeting. It is done prior to final plans, so any revisions can be done prior to negotiations. Changes done during negotiations could have major delay impacts on the schedule.

Prior to this meeting the project must be examined for contamination issues; with the process and necessary contamination reports prepared, have the inventory of all major improvements and structures developed, the presence of underground storage tanks (UST's) and any other possibly hazardous materials on the project. This information is sent to the project manager.

This meeting will discuss all potential right-of-way problems and identify any extreme impacts that could affect the costs or permits that should be avoided in final plan development; for example parking lots, little parcels, etc.

Right-of-Way Acquisition

The LPA shall acquire all real property and property rights required for the project in accordance with all applicable State and Federal laws and regulations. ***This applies***

even if the project has not begun the state/federal process. If an LPA begins a project thinking they will not federal funds, then adds federal funds, previous land acquisitions or donations may jeopardize their federal eligibility

The LPA must contact the DOTD Real Estate Section FIRST to make sure they know the Federal requirements! The DOTD's Real Estate Section will discuss the project and procedures. If real estate is not procured properly, it could jeopardize the whole project.

NOTE: The Federal Relocation Assistance and Real Property Acquisition Policies (The Uniform Act) has different requirements than state law. The LPA must contact the DOTD Real Estate Section FIRST to make sure they know the federal requirements!

- All acquisition MUST BE in accordance with the Federal Uniform Relocation Act. The *"LPA Real Estate Manual"* clearly specifies the requirements. LPA's Right-of-Way Acquisition and Relocation Assistance files must be certified by DOTD Right-of-Way Section.

- Non-compliance with Federal DOTD appraisal, negotiation, acquisition and relocation will cause any Federal funds spent on the project to be returned and future Federal funds to be withdrawn from the project.

- Letting dates can be delayed if the right-of-way is not acquired. Projects are required to have right-of-way clearance **before** letting. The LPA's right-of-way acquisition and relocation assistance files may be subject to review/audit by the DOTD Right-of-Way Section and/or FHWA**.** All files are audited by DOTD/FHWA prior to clearance.

- Acquisition of right-of-way for federally funded projects prior to the completion of the project's NEPA process is not allowed and could jeopardize all federal funding for project.

- It is recommended that the LPA ensure sufficient R/W is identified before contacting land owners. All liability and any cost incurred due to insufficient right-of-way is borne by the LPA.

- Approval is required from land owners if right-of-way or servitude is on public land

- Donations are accepted if all FHWA real estate acquisition procedures are followed Donations and appraisals must be done in accordance with State & Federal requirements

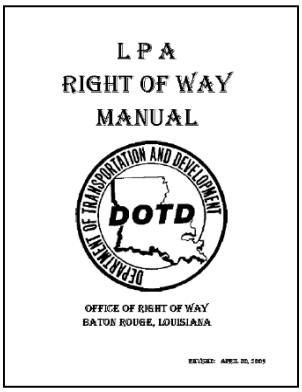
- The LPA bears all administration costs unless stipulated in agreement.

- Do not begin acquiring R/W prior to the written Notice to Proceed from the DOTD Project Manager if seeking Federal reimbursement. This is required before any action is taken in obtaining the right-of-way; otherwise, there is no federal reimbursement for the right-of-way.

- All R/W must certified (by DOTD) prior to project letting

- Any purchased or donated publically owned land must have proper documentation

- The LPA is subject to DOTD oversight and approval to enable Federal participation.



- The Real Estate Section has a detailed manual, entitled the *"LPA Real Estate Manual",* to assist LPAs (whether parish, city, municipality, etc.) in either performing the necessary acquisition functions, or in going through the proper steps to get outside help in performing these functions, to maintain eligibility for Federal assistance.

The Manual is also intended to assist DOTD personnel in understanding their responsibilities in regards to those Local Public Agency projects.

It is important to remember that, while this guide attempts to cover most possibilities regarding who is responsible for the various acquisition functions on Local Public Agency projects that the LPA is responsible for all property and property rights being acquired in accordance with Federal and State regulations and requirements. The LPA is subject to DOTD oversight and approval thereby enabling Federal participation.

It is necessary for the LPA to always check with DOTD Real Estate personnel before acting in any phase of acquisition where Federal participation might be jeopardized.

There are steps in the funding, appraisal, negotiation, acquisition, and relocation process that the LPA must follow. It is the responsibility of the LPA to be aware of these steps from review of the Manual and maintaining contact with the DOTD

Real Estate Section for direction in the process. No action should be taken without written authorization of DOTD Project Manager.

Non-compliance with Federal DOTD appraisal, negotiation, acquisition and relocation will cause any federal funds spent on the project to be returned and future federal funds to be withdrawn from the project.

Real Estate Region Map

(Reference Appendix D-5 for link).

Region 1
Section Contacts: District 04

Contact: **Debra Milstead**, Real Estate Regional Manager - Region 1
Mailing Address: District 04 Real Estate Office
3339 Industrial Drive
Bossier City, LA 71112
Phone Number: (318) 549-8455

Section Contacts: District 05

Contact: **Debra Milstead**, Real Estate Regional Manager - Region 1
Mailing Address: District 05 Real Estate Office
P.O. Box 4068
Monroe, LA 71211
Phone Number: (318) 342-0250

Region 2
Section Contacts: District 08

Contact: **Ronald Powell**, Real Estate Regional Manager - Region 2
Mailing Address: District 08 Real Estate Office
3300 MacArthur Drive
Alexandria, Louisiana 71301
Phone Number: (318) 561-5260

Section Contacts: District 58

Contact: **Ronald Powell**, Real Estate Regional Manager - Region 2
Mailing Address: District 58 Real Estate Office
Highway 15 South
Chase, Louisiana 71324
Phone Number: (318) 561-5260

Region 3
Section Contacts: District 03
Contact: **Robert Richard**, Real Estate Regional Manager - Region 3
Mailing Address: District 03 Real Estate Office
US Highway 90 East
Lafayette, LA 70501
Phone Number: (337) 262-6251

Section Contacts: District 07
Contact: **Robert Richard**, Real Estate Regional Manager - Region 3
Mailing Address: District 07 Real Estate Office
5827 Highway 90
Lake Charles, Louisiana 70616
Phone Number: (337) 437-9250

Region 4
Section Contacts: District 61
Contact: **Kiawasha Pierre-White**, Real Estate Regional Manager - Region 4
Mailing Address: La DOTD Headquarters Building
P.O. Box 94245
Baton Rouge, LA 70804
Phone Number: (225) 242-4593

Region 5
Section Contacts: District 02
Contact: **Erin Roussel**, Real Estate Regional Manager - Region 5
Mailing Address: District 02 Real Estate Office
3108 Williams Blvd.
Kenner, LA 70065
Phone Number: (504) 465-3468

Section Contacts: District 62
Contact: **Erin Roussel**, Real Estate Regional Manager - Region 5
Mailing Address: District 62 Real Estate Office
685 North Morrison
Hammond, Louisiana 70401
Phone Number: (985) 375-0250

Right-of-Way Certification

Certification of the LPA ownership of the property is required from the DOTD Real Estate Section prior to the project letting. Examples of the forms the LPA is required to complete for the various types of acquisition can be found in the exhibits of the *LPA Right-of-Way Manual* beginning on page 38. (Reference Appendix D-5 for link).

Railroad Permits

(If a project is near or crosses a railroad)

23 CFR 646.214(b)(2) requires a safety analysis when a project is near an at-grade railroad crossing. "Near" has been defined as

- The project beginning or ending between the crossing and the required advanced placement distance for the advanced railroad warning sign and the project involves roadway surfacing improvements (exception: preservation treatments and striping projects which DOTD Pavement Marking Standard Plan will govern)
- An intersection traffic signal within the project is linked to the crossing flashing light signal and gate or is within 200' of a crossing.

Project Notice Package (PNP): A PNP is an agreement used to modify existing or install new railroad warning devices and/or crossing surfaces. It typically consists of roadway construction plans, active warning device plans, cost estimate of the railroad work, a copy of the completed Diagnostic Review form, and a signature sheet. Roadway construction plans should be submitted to the DOTD Railroad Unit for review and determination of what is needed and a Diagnostic Review can be scheduled if necessary. A PNP approval takes approximately one year from the date DOTD receives the roadway plans. The typical project types are:

- New roadway with a new at-grade crossing (Some railroad companies may require one to three existing at-grade crossing closures and/or the road authority to assume all future maintenance costs of the new crossing surface and warning devices.),
- Roadway widening
- Overlay with travel lane widening
- New pedestrian at-grade crossings.

Construction and Maintenance Agreement (CMA): A CMA is an agreement between the affected railroad company and the road authority if the project will construct and require maintenance of a new facility/structure within or over the railroad's right of way. A CMA approval takes approximately two years from the date DOTD receives the first set of roadway plans. The railroad company will review each plan submittal to ensure that their minimum design requirements are met. A new servitude may be required if the new facility/structure is on a new horizontal alignment. These project types are typically new overpass/underpasses.

Drainage Permit: A drainage permit is used when a project requires installation of a new drainage structure within the railroad's right of way or modification/replacement of an existing drainage structure that is within the railroad's right of way if the original drainage permit cannot be found. The permit form can typically be found on the railroad company's website with instructions of how to complete and submit. Drainage calculations may be required to show there aren't any negative effects to the railroad's facilities and right of way. A drainage permit can take from six to twelve months to receive approval, depending on the level of impact to the railroad's facilities. Generally there are processing fees ranging up to $1,000 and permit fees ranging up to $1,500. A servitude is not required as the permit serves to document the right of use. The typical project types are:

- Subsurface drainage project that installs a drainage structure within the railroad's right of way, outfalls in the railroad's right of way, or crosses beneath the tracks
- Cross drain and side drain installation and replacement

Wireline Permit: A wireline permit is used when placing a utility within the railroad's right of way, either paralleling or crossing the tracks. The permit form can typically be found on the railroad company's website with instructions of how to complete and submit. A sketch showing the proposed location of the utility is generally required to determine if there will be any conflicts with existing utilities or active warning device wiring. A wireline permit can take from six to twelve months to receive approval, depending on the level of impact to the railroad's facilities or existing utilities. Generally there are processing fees ranging up to $1,000 and permit fees ranging up to $1,500. Servitude is not required as the permit serves to document the right of use. The typical project types are water and sewer improvements and fiber optic line installation.

Right of Entry Agreement (ROE): A ROE agreement is necessary for any project that will require the contractor to enter into the railroad's right of way. This agreement is a standard form agreement that all contractors must submit prior to beginning work on the railroad's right of way. This agreement is usually required in conjunction with all of the above permits/agreements. The ROE agreement is intended to protect the railroad company from all liability and damages that may be caused by contractor. It also advises the contractor of when he can work near the tracks, how to contact the railroad

company if needed, and may require the contractor to provide a work schedule, and list what type of equipment will be used to complete the project. These agreements typically take one to three months to receive approval. The typical project types are:

- Overpass/underpass construction
- Roadway widening
- Pavement preservation
- Drainage improvement/maintenance
- Utility installation
- Striping

Utility Relocation Procedures for LPA projects

I. Projects located on <u>State</u> Highways

a. DOTD will be responsible for obtaining Utility Relocation Agreements and having the utilities relocate their lines as per any other DOTD regular program projects.

b. The funding.
   i. The Entity may opt to pay the state match for the DOTD obligated utility relocation costs.
   ii. If DOTD pays the state match for utility relocation costs, DOTD will stipulate when the project may be let.

II. Non-state Routes – Entity Responsible for Utility Relocation

<u>Rules and Regulations</u>

The LPA is to follow all Federal, State and Local Rules and Regulations as they pertain to their agreements, the LPA and the project.

1.) Laws and Regulations
   a) Louisiana Administrative Code, Title 70, Part II Utilities, Chapter 5 (Reference Appendix D-5 for link).
      1. Including sections 501, 503, 505, 511, 513, 515, 527, 529, 535, 537
      2. Note: Eligible Reimbursement Amount
         - Actual Cost any amount
         - Maximum $25,000 lump sum per eligible agreement

   b) 23 Code of Federal Regulations (CFR) 172

c) 23 CFR 635.410 "Buy America"

d.) 23 CFR 645 subpart A

e.) 23 CFR 645 subpart B
F:\Electronic Code of Federal Regulations.mht

f.) 23 United States Code (USC) 101, 109, 111, 116, 123 and 315

2.) Other Publications

a.) FHWA Utility Program Guide: Utility Relocation and Accommodation on Federal-Aid Highway Projects (Reference Appendix D-5 for link).

b.) AASHTO publication "A Guide for Accommodating Utilities Within Highway Right-of-Way" (Reference Appendix D-5 for link).

c.) AASHTO publication "Roadside Design Guide" (Reference Appendix D-5 for link).

Utility Definitions

Agreements - At 100% Preliminary Plans (approximately mid-way), the Entity can start finalizing agreements if the right-of-way is determined. The agreements between the Entity and Utility Operator contain the principle office of the company, the name and title of the official representing the company, the estimated number of **CALENDAR DAYS** (not working days) and the method by which the costs will be developed ($25,000 maximum lump sum per eligible agreement for federal projects or actual cost). DOTD is not a party to any Entity-Utility Operator agreement

Approved Drawings Letter - When the relocation cost of a utility line is 100%, the Utility Operator's liability, articles of agreement and a cost estimate is not required. However, the Utility Operator must submit drawings showing their existing line and the proposed relocation of the utility line and a Statement of Work. The Utility Operator also sends a letter that acknowledges the relocation is 100% their cost and the number of calendar days necessary to relocate their line.

Audit - The Entity is responsible for providing the audit for all compensable interest payments. For Entity owned utilities an independent audit is required.

Betterment - Any upgrading of the facility being relocated that is not attributable to the highway construction and is made solely for the benefit of and at the election of the utility. Betterment is not a reimbursable cost.

Cost Estimate or Estimate of Cost - The Estimate of Cost should clearly show how the cost of the relocation is developed (Note that the final invoice must be in the same format as the estimate.) The estimate should be developed under the following applicable Sections:

a. Preliminary Engineering – Cannot be a % of construction cost
b. Right-of-Way
c. Temporary Construction
d. Permanent Construction
e. Removal Costs
f. Betterment
g. Supervision and Overhead

Each Section should show the costs by items, unit hours, man-hours, contract unit prices, etc. in the same manner as the actual costs will be charged or that would support a lump sum estimate. A summary recap of the sections shown above must be included.

Compensable Interest & Cost Distribution for Reimbursement - Compensable interest is to be set in accordance to all Federal, State and Local Regulations. The percentage for each party needs to be specified in the written agreement between the Entity and the Utility Operator. (Proof of prior rights, a franchise agreement, local law or other documents that would justify compensation is required from the Entity before funds can be authorized for reimbursement.) The cost estimate from the utility with a letter from the Entity's legal representative justifying compensation is sent to the DOTD District Utility Specialist (DUS). It must be provided for any compensation and approved by the FHWA through DOTD prior to the agreement execution. Written notification from DOTD is required prior to incurring any reimbursable expenditure.

Entity Owned Utility - The Entity is responsible to provide a Statement of Work and Plan Drawings showing the existing location of their utilities and any proposed relocation of their utilities. The Entity is to send either an agreement or a letter from the Entity stating their intention of which of their utility relocations are to be included in the construction plans (any utility work the project contractor is expected to perform). When reimbursement is being requested, the Entity is to provide a separate cost estimate for each Entity owned utility.

Entity Responsibility - It is the Entity's responsibility to ensure that their agreements with the Utility Operators and the percentages of compensable interest are in accordance with all applicable Federal, State and Local Laws and Regulations. The Entity is responsible for reviewing the plans/drawings submitted by the Utility Operators to ensure that the relocation of all utility lines are not in conflict with other utility lines or in conflict with proposed construction. (This includes review of relocation elevations with plan elevations; ditches, catch basins, roadway grade, etc.)

Meeting Notifications - The Entity is responsible for contacting the Utility Operators and inviting them and the DUS to the following meetings:

1.) Pre-Design
2.) Plan-in-Hand
3.) Preconstruction

No Conflict Letter - When a Utility Operator decides their line is not in conflict with the proposed construction, the Utility Operator sends a statement or letter stating "no conflict".

Notification of Utility Operators - Utility Operators shall be identified and contacted by the Entity. The Entity is responsible for providing the Utility Owner plans throughout the project development.

Statement of Work - When the Utility Operator has to relocate, the Utility Operator is to provide a "Statement of Work" to the Entity. The "Statement of Work" is to include a short narrative of the work to be performed, a more complete narrative of individual relocations which would not follow a routine relocation, a statement that the work will be performed by company forces, continuing contract, competitive bids or other method, an explanation of betterments if included in the relocation, estimated number of **CALENDAR DAYS** to complete the adjustments (show breakdown of: time to order material, design, and construction), justification for removal or abandonment of existing facilities, followed by documentation with estimate if necessary.

Utility Clear Date - A project is not considered delivered until all utility documentation (utility agreements/letters and the Utility Certification Letter) have been submitted and reviewed by the DOTD. This does not mean that the utilities have been physically moved.

Utility Documentation - It is the Entity's responsibility to provide all required utility documentation to the DUS two months prior to the Utility Clear Date in order to have it reviewed, processed and any corrections made. The documentation includes the *Utility Certification Letter, Agreements between the Entity and the Utility Operators, Approved Drawings Letters, Waiver of Relocation Drawings Letters, and No-Conflict Letters*

Utility Plans - The Entity must give each Utility Operator a set of useable plans for the project. Each Utility Operator is to indicate on the provided plans or on their own set of plans* their existing and proposed lines. These marked up plans are given to the Entity for approval prior to the written agreement being executed. *Note: If using their own plans, the plans must use the same benchmarks and stations in the design plans.

Utility Relocation Notice to Proceed (NTP) - The Entity issues the NTP. This can be issued when the right-of-way has been acquired and the utilities can be moved. The Entity should issue a NTP at the earliest possible date.

Waiver of Relocation Drawings Letter - When a utility line is located on a pole owned by another operator, the Utility Operator sends a letter that they will relocate on the other operator's poles and state the number of calendar days needed to relocate their line.

<u>Note</u> – Any changes the Entity makes to the design can affect the utilities. After the utilities have been moved, any new relocation required because of plan errors or changes will be at the Entity's cost.

The following is documentation required for all projects-

1. Utility Certification Letter
    - Must be on the LPA's letterhead, signed by an authority of the LPA. It lists all utilities in the area even if there are no conflicts with any of the utilities. (DOTD includes this information in the construction contract.)
        - Total reimbursable cost of relocating the utility lines for the project
        - Name of each utility owner
        - Company address of each utility owner
        - Number of CALENDAR DAYS each utility operator required to complete their adjustments, including any LPA owned utility
        - A statement that the LPA responsible charge has received up-to-date design plans from all utility operators
        - A statement from the LPA responsible charge that they have received letters from each utility operator stating that arrangements have been made to adjust their facilities to accommodate the project
        - A statement that the LPA will relocate their own lines that are not included in the construction plans
2. Utility Reimbursement Request Letter
    - Must be on the LPA's letterhead signed by an authority of the LPA. In this letter the LPA expresses whether or not they are requesting reimbursement from the program for utility relocation costs. (Only costs that are proven to be the LPA's liability will be considered.) This letter is sent to the DOTD Project Manager
3. A letter is sent to the MPO (if applicable) and to the DOTD Project Manager with the cost breakdown of each utility
4. The LPA responsible charge confirms the funding is on the TIP/STIP

<u>Entity routes with no Federal funding requested</u>

In accordance to DOTD's Standard Specifications for Roads and Bridges, Section 105.06, the Entity will still be required to send a Utility Certification Letter.

1) The Utility Certification letter will be required to be signed by the Entity's representative
2) The DOTD District Utility Specialist (DUS) or HQ Utilities no longer needs to sign approval
3) The DOTD Urban System Project Manager should receive the Utility Certification Letter

4) The DOTD Urban System Project Manager will place on Falcon any stipulations from the Utilities with which the Entity is required to comply.

Entity routes with phase 4 funding requested

1) The Entity sends their proposed utility relocation agreements to DOTD Urban System Project Manager who then will forward to the DOTD HQ Utility Engineer.
    i. The DOTD HQ Utility Engineer verifies:
        1. The required FHWA stipulations are included in the agreement
        2. There are no clauses that obviously violate FHWA requirements i.e. paying the Utility in advance of work being done.
    ii. DOTD has a utility relocation agreement(s) (URA) template that meets the FHWA requirements that the Entity's may use. Entity modifications must be cleared by DOTD HQ Utility Engineer.
    iii. Once the Entity URAs are approved, all executed URAs and supporting documents are submitted to the DOTD Urban System Project Manager who will then forward it to the DUS for review and concurrence. The DUS will then forward the documents to the HQ Utilities for review and concurrence. Invoices will follow the same procedure.

Additional documentation required if reimbursement is requested

1. Supporting documentation of the LPA's compensable interest is required. There must be proof of prior rights and letter from the LPA's legal representative verifying this information. A copy of this letter is sent to the DUS.
2. The agreements are between LPA & the utility operators should include:
    - The principal office of the utility operator.
    - The name & title of the official representing the company
    - The estimated number of CALENDAR DAYS (not working days)
    - The method by which the costs will be developed (lump sum or actual cost) & cost estimate
    - The amount of the agreement with a breakdown of amount owed by the LPA and utility operator
    - The breakdown of cost liabilities between the LPA and utility owner
    - The signature of utility owner's company official, with witnesses
    - The street address of location of the utility owner where records may be audited
    - The cost estimate
3. The utility plans (plans/drawings from each utility operator showing their existing & proposed lines)
4. A statement of work from the utility operators
    - A short narrative of the work to be performed
    - A more complete narrative of individual relocations which would not follow a routine relocation

- A statement that the work will be performed by company force, continuing contract, competitive bid or other method
- An explanation of a betterment if included in the relocation
- An estimated number of CALENDAR DAYS to complete the adjustments
- The justification for removal or abandonment of existing facilities, followed by documentation, if estimate is necessary

5. Cost estimate from the utility operators detailing the cost to relocate the utility line
6. Plans/drawings from the utility operators showing their existing and proposed lines
7. LPA owned utilities documentation
   - Statement of work
   - Plans/drawings showing the existing and proposed lines
   - Cost estimate breakdown for each LPA owned utility on the project

Additional documentation if no reimbursement required

1. Approved Drawings / Letters
   - Includes the plans/drawings from the Utility Operators showing their existing and proposed lines
   - Statement of Work
2. Waiver of Relocation Drawings Letters
3. No-Conflict Letters

Utility Coordination Preliminary Plan Tasks

At 90% preliminary plans, the LPA responsible charge sends a list of utility operators to the District Utility Specialist (DUS). They send plans to the utility operators and notify each utility operator prior to the plan-in-hand meeting that a written agreement is needed for the utility operator to relocate their line.

At 95% preliminary plans, or the plan-in-hand/field inspection, the LPA responsible charge (or LPA consultant) invites and sends a copy of the plans to each utility operator and the DUS to the plan-in-hand meeting. The LPA responsible charge provides a date to DUS when they will have all required utility documentation to the DUS.

Utility Coordination Final Plan Tasks

These tasks begin at 60% final plans (approximately mid-way through final plans) through letting

- The LPA responsible charge provides an estimated date of submittal of all utility agreements (Utility Clear Date).
- The LPA responsible charge provides monthly status updates of agreements to DUS
- The LPA responsible charge (or LPA consultant) finalizes agreements if final right-of-way taking lines are established.
- The LPA responsible charge issues NTP to utility operator

Utility Coordination after Letting Tasks

- The LPA responsible charge (or LPA consultant) invites each utility operator and DUS to Pre-Construction meeting

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Engineering Design & Plan Development

The LPA is required to use State design standards as per State Law, RS §48:35, Minimum Safety Guidelines of Highway Design, Maintenance and Construction Exemptions, Section "C" *The Department of Transportation and Development shall adopt specific minimum safety guidelines with respect to highway and bridge design, construction, and maintenance for all public roads, highways, and streets under the jurisdiction of any political subdivision of this state and not in the state-maintained highway system. These guidelines shall correlate with and, so far as possible, conform to the system then current as approved by the American Association of State Highway and Transportation Officials."*

Requirements from the Entity-State Agreement – *"The design shall comply with the latest edition of the Louisiana Standard Specifications for Roads and Bridges, applicable requirements of 23 CFR Part 630 ("Preconstruction Procedures"), criteria prescribed in 23 CFR Part 625 ("Design Standards For Highways"), LADOTD guidelines, conformance to the applicable Publications and Manuals on the DOTD website, all applicable accessibility codes and all related regulations."*

Policies and Procedures

The list below shows the most common references and manuals that reflect the DOTD policies and procedures. This list is not inclusive and the design engineers must use all policies and procedure that apply to their project.

English and Preservation (PRR) Design Guidelines - State law, R.S. §48:35, requires that the state highway system (all roads & streets) conform to the DOTD minimum design guidelines in the state for

- Freeways
- Rural arterial roads
- Urban arterial roads and streets
- Suburban arterial roads and streets
- Rural collector roads

- Urban and suburban collector roads and streets
- Local roads and streets

Criteria for these guidelines are dictated by the scope of work. Categories are listed below.

- Major Rehabilitation
- Rural & Urban
- NHS Routes & Non-NHS Routes
- Minor Rehabilitation
- Rural & Urban
- NHS Routes & Non-NHS Routes

Minimum English Design Guidelines and Minimum PRR Design Guidelines (reference Appendix D-5 for links).

Americans with Disabilities Act (ADA) – This law is from the U.S. Department of Justice and affects ***all*** public agencies. (Reference Appendix D-5 for link). DOTD has created Standard Plan PED-01 – Sidewalks which addresses the requirements to make the sidewalks accessible. The Access Board can be consulted at 1-800-872-2253. Some of the design criteria are listed below (not inclusive list):

- 4’ minimum width with bump outs
- 5’ desirable width
- 2% max. cross slope
- Truncated domes at street intersections
- 5% max. long. slope
- 25’ max. length of a ramp without a rest area
- 200’ turnaround if 4’ width
- 8% max. slope in ramp

AASHTO *A Policy on Geometric Design of Highways and Streets* is often called "The Green Book" because of the color of its cover. This book covers the functional design of roads and highways including such things as the layout of intersections, horizontal curves and vertical curves

AASHTO Guide for the Planning, Design and Operation of Pedestrian Facilities, 1st Edition - This guide provides guidance on the planning, design, and operation of pedestrian facilities along streets and highways. It focuses on identifying effective measures for accommodating pedestrians on public rights-of-way.

AASHTO *Guide for the Development of Bicycle Facilities, 4th Edition* - This guide provides information on how to accommodate bicycle travel and operations in most riding environments. It provides guidance to meet the needs of bicyclists and other highway users.

Manual of Uniform Traffic Control Devices (MUTCD) **-** This manual was adopted by the DOTD to describe the uniform system of traffic control devices used on state highways. DOTD Traffic Control (TC) details are available.

Engineering Design and Standards Manual (EDSM) – These contain directives impacting the engineering functions of the DOTD. It consolidates all of the directives containing policies, procedures, standards, and guides relating to the administration of the Highway Program into one location. (Reference Appendix D-5 for link).

- Examples:
- Curb policy - EDSM No: II.2.1.7
- Sidewalk policy -EDSM No: II.2.1.10
- Roundabout study and approval policy - EDSM No: VI.1.1.5
- Roundabout design policy- EDSM No: VI.1.1.6
- Traffic signal policy- EDSM No: VI.3.1.1

Roadway Design Procedures and Detail Manual – This manual was created to provide a convenient guide of the acceptable policies and procedures used for the development of roadway construction plans for DOTD. It is intended to promote consistency, where possible, between all individuals involved in the roadway design and plan preparation process. (Reference Appendix D-5 for link).

Bridge Design Manuals

Bridge Design Manual – This manual makes policy statements and can be used as a policy guide for structural analysis to aid the Engineer in developing bridge plans. It is to be used in conjunction with the Design Memorandums or revisions to the "Bridge Design Manual" issued as Memorandum to all Contractors prior to beginning any work. (Reference Appendix D-5 for link).

LRFD Bridge Design Manual - This manual documents policy on LRFD bridge design in Louisiana. It is a supplement to the latest edition of AASHTO LRFD Bridge Design Specifications, which designers should be adhere to unless directed otherwise by this document. (Reference Appendix D-5 for link).

DOTD Construction Plans Quality Control / Quality Assurance Manual – This manual is designed to provide a mechanism by which all construction plans can be subject to a systematic and consistent review with the goal to create a set of quality project plans, which should be substantially error free. (Reference Appendix D-5 for link).

Standard Specifications (Blue Book) – This reference is a compilation of provisions and requirements for the performance of prescribed work. It contains the specifications for general application and repetitive use. The Supplemental Specifications are the

additions and revisions to the Standard Specifications. (Reference Appendix D-5 for link).

Complete Streets Policy - All projects shall consider the impact that improvements will have on safety for all users and make all reasonable attempts to mitigate negative impacts on non-motorized users. If any facet of the policy is not implemented on a project, documentation is required from the designer that the policy was considered and why it was not implemented. (Reference Appendix D-5 for link).

Access Policy - It establishes uniform criteria regulating the location, design, and operation of new access connections, while balancing the needs and rights of property owners and roadway users. When an existing roadway is reconstructed, existing access connections should be altered to conform to the policy regulations. DOTD may allow site-specific deviations based on sound engineering principles and an engineering study for unique conditions. (Reference Appendix D-5 for link).

Policy for Roadside Vegetation Management – Located on the DOTD website, it addresses the following items: Guidelines and Categories of Roadside Vegetative Maintenance, Herbicides, Wildflowers and Landscaping. . (Reference Appendix D-5 for link).

Technical Memoranda (Bridge Design) – It contains all of the technical memoranda referencing bridges. The documents in the technical memoranda section are changes that will be made to the Bridge Design manual in the next update. It is located on the DOTD Bridge Design website. (Reference Appendix D-5 for link).

Asphalt Memorandum – This is the "How To" of asphalt. Some examples are: the unit weight of asphalt, pay items, uses, and types. (Reference Appendix D-5 for link).

Survey

The location survey for any particular project provides the essential field information necessary for the preparation of plans and specifications. It locates all features (data) within the project limits that could affect the design, i.e. utility location, drainage features.

Example of a Scope of Services for an Overlay

The Consultant shall perform all services required to make a complete topographic survey, in English units of measure, as required for the proper design and layout of the project. The DOTD requirements which shall govern this survey are specified in the current edition of the DOTD Location and Survey

Manual. Deviations to the manual shall be approved by the District Project Manager. Vertical control is not anticipated. The survey shall include, but is not limited to, one or more of the following:

1) Station the project centerline every 100'. Paint stations on paved shoulder, or where no paved shoulder exists, paint stations on travel lanes outside of apparent wheel paths.
2) Station reference points along the project in the event the painted centerline stations fade.
3) Station and inspect all drainage structures. Note condition, cover, size, type, thickness and length.
4) Cross-section the roadway at a minimum of every 1000' but not less than 3 representative sections. Cross sections to extend from back of sidewalk to back of sidewalk, or a minimum of 5’ from the edge of the pavement or back of the curb. Cross-section the roadway at the PC, PT, and apex of curves to determine superelevation rates, and at visible changes in cross slopes. Station and cross section intersecting roads or driveways within curve and note radii, if applicable.
5) Station and measure travel lanes and shoulder widths at transition points or changes in material type. Station and measure turn lanes, acceleration and deceleration lanes, and parking lanes.
6) Determine the degree of curves, note directions, and locate the stations of the observed PCs and PTs.
7) Station and describe with approximate quantities, the type of striping, symbols, school crossings, railroad crossings, turn arrows, legends, and posted speed limit signs.
8) Count all driveways. Note type of material, whether residential or commercial. Measure the width of concrete driveways at or near the edge of the shoulder. Measure the width of asphaltic driveways at a point approximately 8’ from the near edge of the travel lane.
9) Measure the area to be overlaid on city street turnouts. Survey for un-signalized intersections shall extend 5’ beyond return P.C. and 50’ down the cross streets for signalized intersections.
10) Station any exceptions to the overlay areas.
11) Station and offset all manholes, water valves, gas valves, and any other utilities visible at the surface and within 5’ of the edge of pavement or back of curb.
12) Provide utility locations within limits of construction.
13) Station and measure the depth of any rutting. Station and measure any areas needing to be patched.
14) Station and measure the size of existing roadway patches.
15) Note any existing loop detectors and locate by cross road names.
16) Station and provide offset and description of any appurtenances (buildings, shrubs, planting beds, historical markers, statues, benches, etc…) within 5’ of the edge of the pavement or back of curb which are visible at the surface.

Example of a Survey Scope for a Roundabout

The survey will begin at the Intersection of Louisiana Highway "A", City Street "1", City Street "2", and City Street "3". (This intersection will be referred to as the Point of Beginning in this scope) From this Point of Beginning the survey will proceed in a northeasterly direction along La Highway "A" for approximately 750 feet. The width of the Survey and DTM in this portion will be 150 feet East and West of the Existing Alignment of Louisiana Highway "A". From the above Point of Beginning the survey will proceed in a northwesterly direction along City Street "1" for approximately 750 feet. The width of the Survey and DTM in this portion will be 150 feet East and West of the Existing Alignment of City Street "2". From the above Point of Beginning the survey will proceed in a westerly direction along City Street "3" for approximately 750 feet. The width of the Survey and DTM in this portion will be 150 feet North and South of the Existing Alignment of City Street "3". From above Point of Beginning the survey will proceed in a southerly direction along La Highway "A" for approximately 750 feet. The width of the Survey and DTM in this portion will be 150 feet East and West of the Existing Alignment of Louisiana Highway "A". From above Point of Beginning the survey will proceed in an easterly direction along Back Street for approximately 750 feet. The width of the Survey and DTM in this portion will be 150 feet North and South of the Existing Alignment of Back Street.

Any side or major intersecting roads that the above description intersects shall also be included with the survey limits. (Refer to the survey request form)

An existing drainage map will be required. Please refer to the Location and Survey Manual for detailed instructions of what is required for the drainage map.

Permission of land owners shall be acquired by the consultant before entering any property associated with this description.

The project alignments shall be established using the existing centerline of roads.

All work to be done in the English units of measurement.

Scope Changes

The plans must be designed to reflect the scope determined in Stage 0 document and/or the application and incorporated in the Entity-State Agreement

- Scope changes may be permitted. Examples of changes include changes to project limits or quantities
- The DOTD Program Manager (and MPO if applicable) must agree and approve the change

- Any significant change may require a Supplemental Agreement to the Entity-State Agreement
- The Funding Commitment Letter must be revised in the non-MPO areas and a TIP modification is required in the MPO areas (if there is a change in scope, there will be a change in budget.)
- Any change may affect the environmental clearance (including restarting the process)
- Added work may be non-participating (items of project work that are not a part of the federal aid funding)
  The scope is not increased if your project is under budget

Traffic Counts

In order to analyze traffic load effects for reflection cracking, annual number of axle loads for each vehicle class and axle type is entered in the analysis process. The number of axle loads can be determined using the traffic load categorized based on the FHWA vehicle class (reference Appendix D-5 for link), the axle type, and the number of tires.

- **Classification of Vehicles -**
  FHWA defines vehicles into 13 classes depending on whether they carry passenger or commodities. Non-passenger vehicle which are from class 4 to class 13 are divided by the number of axles and the trailer units. The light axle load groups, such as vehicle classes 1 to 3, do not have significant effects regarding load related distresses.
  The time is critical when performing traffic counts. Example: Make sure it is taken when school is in session and that it is at least 3 weeks after school starts if a school is near the project.

Geotechnical Investigation

Boring request initiates field work/design. The timeline depends on complexity of the site conditions or type of structure. Issues that can affect the timeline are access to property to obtain borings. This can be either permission or terrain. Change in alignment can affect the usefulness of the boring especially if it is more than 200' from original. It also depends on size of structure, number of original borings, site conditions

Typical Duration to obtain boring

A 100-ft long bridge; no special access required:
- 2 @110-ft deep borings
- Field work, testing, design = 2 months after NTP

A 400-ft long bridge; no special access required:
- 5 @130-ft deep borings
- Field work, testing, design = 3.5 months after NTP

An 800-ft long bridge; no special access required:
- 9 @140-ft deep borings
- Field work, testing, design = 6 months after NTP

Consult early with DOTD to avoid problem area such as levees, high fill (over 10'), sequencing phase construction, bridge widening in tight conditions, sheet piles, detour pile lengths,

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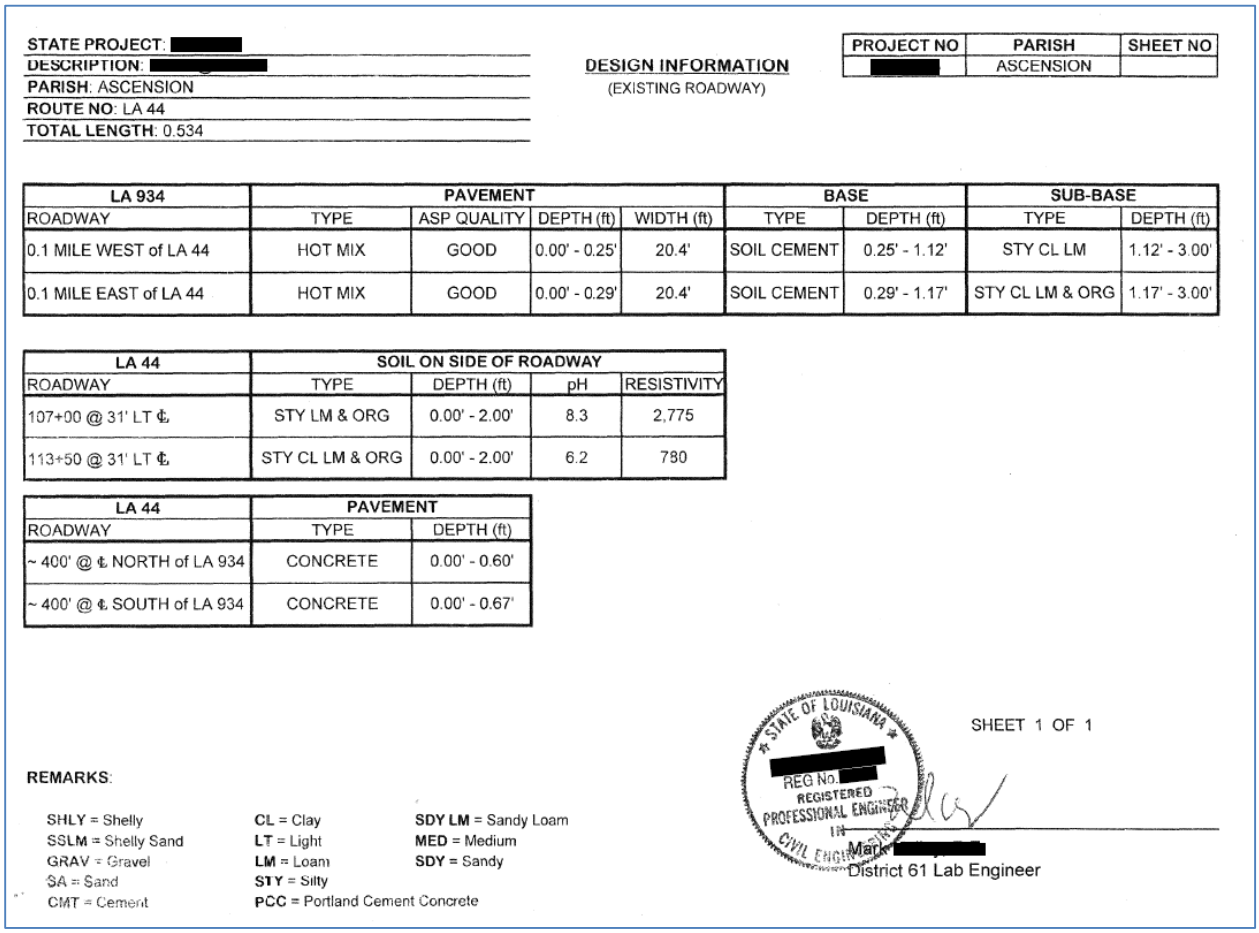
Typical Section Design

Overlays
- The LPA engineer/consultant is required to submit corings with samples taken approximately every 1000 feet to a depth of 4 feet below the existing roadway and no less than two feet below the bottom of the base course, whichever is greater. The different layers of the soil strata shall be identified every foot or strata break at the discretion of the lab engineer of record using the AASHTO classification system and the following tests: Atterberg limits, sieve analysis, hydrometer tests, percent organics, moisture content, as well as pH and resistivity when applicable.

New Construction
- The LPA engineer/consultant is required to submit a subgrade soil survey with samples taken approximately every 1000 feet along the new roadway alignment. The depth of each boring should be at least 8 feet below the finished roadway elevation or natural ground, whichever is greater, with additional testing requirements for areas of cut/fill greater than 10 feet.

Settlement/Slope Stability Study
- In cut areas, the material to be removed shall be tested and sampled with an emphasis on silt content, with the boring terminating at least 8 feet below the finished roadway elevation. In fill areas, the boring should be continuously sampled to at least two and up to three times the maximum fill height, with consolidation testing being necessary as the fill heights approach 10 feet.



STATE PROJECT: [redacted]
DESCRIPTION: [redacted]
PARISH: ASCENSION
ROUTE NO: LA 44
TOTAL LENGTH: 0.534

DESIGN INFORMATION
(EXISTING ROADWAY)

PROJECT NO	PARISH	SHEET NO
[redacted]	ASCENSION	

LA 934	PAVEMENT				BASE		SUB-BASE	
ROADWAY	TYPE	ASP QUALITY	DEPTH (ft)	WIDTH (ft)	TYPE	DEPTH (ft)	TYPE	DEPTH (ft)
0.1 MILE WEST of LA 44	HOT MIX	GOOD	0.00' - 0.25'	20.4'	SOIL CEMENT	0.25' - 1.12'	STY CL LM	1.12' - 3.00'
0.1 MILE EAST of LA 44	HOT MIX	GOOD	0.00' - 0.29'	20.4'	SOIL CEMENT	0.29' - 1.17'	STY CL LM & ORG	1.17' - 3.00'

LA 44	SOIL ON SIDE OF ROADWAY			
ROADWAY	TYPE	DEPTH (ft)	pH	RESISTIVITY
107+00 @ 31' LT ℄	STY LM & ORG	0.00' - 2.00'	8.3	2,775
113+50 @ 31' LT ℄	STY CL LM & ORG	0.00' - 2.00'	6.2	780

LA 44	PAVEMENT	
ROADWAY	TYPE	DEPTH (ft)
~ 400' @ ℄ NORTH of LA 934	CONCRETE	0.00' - 0.60'
~ 400' @ ℄ SOUTH of LA 934	CONCRETE	0.00' - 0.67'

SHEET 1 OF 1

STATE OF LOUISIANA
[redacted]
REG No. [redacted]
REGISTERED PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING

Mark [redacted]
District 61 Lab Engineer

REMARKS:

SHLY = Shelly
SSLM = Shelly Sand
GRAV = Gravel
SA = Sand
CMT = Cement
CL = Clay
LT = Light
LM = Loam
STY = Silty
PCC = Portland Cement Concrete
SDY LM = Sandy Loam
MED = Medium
SDY = Sandy

Figure 1 – Example of a Subgrade Soil Survey

Formatting Plan Sheets

In the plan development phase all basic design decisions and recommendations are made and included in the plans.

Plans are defined as contract drawings which show location, type, dimensions and other details of the prescribed work

The Entity-State Agreement states: The design standards shall comply with the criteria prescribed in 23 CFR Part 625 (“Design Standards For Highways”), and DOTD guidelines. The format of the plans shall conform to the latest standards used by DOTD in the preparation of its contract plans for items of work of similar character. Conformance to the applicable Publications and Manuals found on the DOTD website is required. The document must ensure all applicable accessibility codes and all related regulations are clearly stated in this section, include: ADAAG, 2010 ADA Standards for Accessible Design, MUTCD, PROWAG, Section 504 of the Rehabilitation Act of 1973, 23 CFR 450, State DOT Regulations, USDOT, 49 CFR Part 37.

Chapter 8, Roadway Plan Preparation, provides detailed information on DOTD plan formatting requirements and should be closely followed. To assist the LPA/consultant in providing the plans in the correct format, plan sheets templates are available through the DOTD project manager.

All DOTD plans follow the following format (Order of plan sheets can be found in Fig. 8.1.4 Road Design Manual). (Reference Appendix D-5 for link).

- Title Sheet – format examples can be obtained from the PMs
- Typical Section (if applicable) – must have legends
- Tables & Breakdowns - Examples can be found in the Road Design Manual
- Bid items – Must conform to the DOTD Bid item list
- Scope of work and the DOTD PM will determine which layout is required
  - Plan sheets – If all information can be accurately and easily communicated without a profile view
  - Plan and profile - Typically used when a grade is set or drainage is involved Dual drainage lines require a profile for each

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Design Submittals to DOTD

Preliminary Plan Submittals

- Submittals are sent by LPA responsible charge (not the consultant). It is recommended that the LPA responsible charge contact the DOTD PM before a submittal to ensure they have all of the required documents for the submittal. All comments from DOTD must have a written response. The engineer/designer is encouraged to contact the DOTD PM to discuss any comment.
- Each plan submittal must have the required information of the engineer of record (Chapter 27, Section 4.b.i. of the ***Professional and Occupational Standards*** (Louisiana Administrative Code October 2013 pp. 26-27) of the Louisiana

Professional Engineers and Land Surveyor (LAPELS) Board Rule states *" Preliminary Work: All preliminary documents, so marked in large bold letters, shall contain a statement that the documents are not to be used for construction, bidding recordation, conveyance, sales, or as the basis for the issuance of a permit. Preliminary documents are not required to have the licensee's seal, signature and date affixed, but must bear the name and licensure number of the licensee, and the firm's name, if applicable".* (Reference Appendix D-5 for link).

- Add a date generator on the electronic plan sheets (creates a printing date)

Required Submittals by Program

- LRSP – 2 (preliminary & final)
- TAP & SRTS – 3 (preliminary, Plan-in Hand & final)
- Urban System Preservation - 2 (preliminary & final)
- Urban System Large Project – 7 (30%, 60%, 90%, 100% preliminary & 60%, 95%, 100% final)

Submittals for the preliminary submittal vary according to the program. Every program has a 95% submittal which is for a plan-in-hand (field inspection).

Plan-in-Hand Inspection (Field Inspection)

The preliminary plans are considered 95% complete at this milestone. All basic design decisions, or recommendations, have been made and are shown on the plans. The purpose of this meeting is to allow the field inspection participants to evaluate the plans in relation to existing field conditions and note any changes that might affect the plans. An Office Review is held to discuss the project and identify any problems to review in the field. The field inspection participants will investigate the issues identified in the office review in the field and will discuss any concerns between the plans and the existing physical conditions.

This inspection also provides an opportunity for various sections and agencies to discuss the project and make recommendations. Final plan preparation address the issues identified in the field and can begin after the appropriate environmental clearance has been received.
The plan-in-hand inspection reviews the plans with respect to constructability. The following topics are discussed

- Typical section – Review proposed section

- Pay items – Ensure applicable items are included, i.e. temporary erosion control, tempo maintenance aggregate, cleaning ditches, etc.
- Plan-and-profile sheets – Ensure sufficient information is included, i.e. adequate right-of-way, adequate outfall information, potential hazards, etc.
- Geometric details – Review for areas that improvements can be made
- Sequence of construction – Review for traffic maintenance, detours, maintenance of drainage, time restrictions, etc.
- Bridge plans - Examples of review - Ensures are required information for construction is shown on the plans, identifies if detour is required, any required drainage excavation, need for test piles or vibration monitoring, etc.
- General topics – Identifies any potential issues such as major utility conflicts, major right-of-way conflicts, salvageable material, extra-ordinary maintenance problems anticipated, clearing and grubbing separate project, etc.

Plan-in-hand format typically has an office review prior to going to the field. In the office r

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Design Exception/Design Waiver

Definitions:
- A *Design Exception* is a violation of design guidelines.
- A *Design Waiver* is a violation of policies (e.g., EDSMs, AASHTO guidance, etc.)

Any design exception must be approved by the DOTD Chief Engineer in accordance with Section "B" As per State Law, RS §48:35, *The chief engineer may designate highways within the state highway system for reconstruction or repair at guidelines which are less than those as approved by the American Association of State Highway and Transportation Officials*

<u>Design Exception/Design Waiver Process</u>

- The request must be studied, justified, and documented before sending a formal request to the DOTD Chief Engineer
- Approved requests are recorded and noted on the plan sheet in the area of the affected request
- The note includes: the description of the exception/waiver, date of the exception approval, and name of the person approving the exception

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Final Plans

- Final plan submittal to DOTD must be complete (Including signatures) before the Project Manager can submit the package to the DOTD Chief Engineering for signature and ultimately for bidding. The package should include the following:
  - Plan-in-Hand Report and Constructability/Biddability Review (Reference Appendix D-5 for link).
  - QA/QC (Prelim. & Final) (Reference Appendix D-5 for link).
  - Preservation Rehabilitation & Replacement (PRR) report and/or Design Exception/Design Waiver Request (Reference Appendix D-5 for link).
  - Other checklists may be required as DOTD reevaluates its QA/QC policy

*Final **Full-Size** Plan Submittal*

- 1 - Full sized set of stamped, signed and dated 22" X 34" plans, title sheet must be mylar
- 1 - Half sized set of plans 11" X 17"
- Cost estimate
- Approved NS pay items specifications with a stamped, signed and dated cover sheet – Electronic version also required
- Calculation reports
- Completed trainee determination form if cost of project is >$750K

*Final **Letter Size** Plan Submittal*

- 1 - final letter size set of stamped, signed and dated 8-1/2" X 11" plans, title sheet must be mylar
- Cost estimate
- Approved NS pay items specifications with a stamped, signed and dated cover sheet – Electronic version also required
- Calculation reports
- Completed trainee determination form if cost of project is >$750K

DOTD Standard Plans – These are sheets signed by the DOTD Chief Engineer. They are located on the internet (ProjectWise). They shall be listed on the title sheet with latest revision dates under the *Index to Sheets*. *The consultant/designer is required to insert them into the plans.* Modifications to these sheets are not allowed.

DOTD Special Details – These sheets are signed by a DOTD engineer, but not the DOTD Chief Engineer. They are located on the internet (ProjectWise). They shall be

listed on Title Sheet in the Index to Sheets. ***The consultant/designer is required to insert them into the plans.*** Alternatives are allowed if they are stamped and signed by the designer without a design exception.

Lighting

All electrical plans must have a licensed Electrical Engineer design, stamp and seal the plans.

The TAP ***decorative*** lighting must include the "**CERTIFICATION FOR PERMIT LIGHTING"** form with the plans (QA/QC from Bridge Design is also required). (Reference Appendix D-5 for link).

The plans delivered for ***street*** lighting projects must be reviewed by the DOTD Electrical Section. The use of a retainer contract by DOTD for the review of the plans may be necessary. If a retainer contract is used, the LPA will be required to fund the task order. The plan review process for consultant/LPA projects includes a 30; 60; 95% and final review of the plans. This review covers both electrical design and illumination design review.

All lighting projects require a signed maintenance agreement installation, a resolution signed by Mayor prior to beginning design, a maintenance agreement following the resolution which can be lengthy. It is recommended that the sponsor starts early coordination to avoid delays in delivery.

Lighting Facts:

- All Roadway Lighting is owned and maintained by Local Municipalities
- E.D.S.M II.2.1.9 Lighting Of Roadways & Structures And Decorative Lighting Of State Bridges
- "A Guide to Constructing, Operating, And Maintaining Highway Lighting Systems" (Reference Appendix D-5 for link).
- Illumination design must interface with surroundings and does not start and stop at a survey line
- Existing light poles can seldom be simply moved without violating lighting standards

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Landscaping

All landscaping plans must have

- A licensed landscape architect design, stamp and seal the plans.
- Should account for the topography, drainage and site distance for the site
- Stationing with setback distances in the plan details (to assistance in construction layout)
- A minimum of 3 plant sources and where the plant material can be obtained
- A project specific signed Maintenance Schedule and Projected Annual Cost Report (to be included with the PS&E package and will become a part of the Agreement)

Lack of maintenance will be grounds for remedial action

Transportation Management Plan (TMP)

Every project that affects the transportation network excluding emergency maintenance work shall include a TMP.

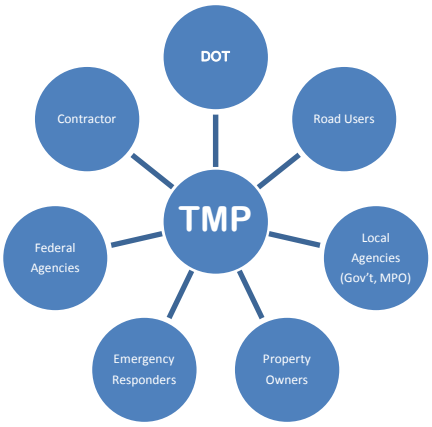
What is a Transportation Management Plan (TMP)?

A TMP is more comprehensive approach to managing Work Zone (WZ) safety and mobility. A TMP is a design document to show how a project will be built and how transportation safety and mobility will be managed during the project construction. A TMP lays out a set of coordinated transportation management strategies and describes how they will be used to manage the work zone impacts of a road project. A TMP is included in a set of construction plans. Transportation management strategies for a work zone include:

1. Temporary traffic control measures and devices (Temporary traffic control plans (TTC))*
2. Public information and outreach
3. Operational strategies (e.g., travel demand management, signal retiming, traffic incident management, etc.).

The scope, content, and level of detail of a TMP may vary based on the State or local transportation agency's work zone policy and the anticipated regional and project level work zone impacts of the project.

TMPs are necessary because WZ management is increasingly complex. There are increasing traffic volumes using the same roads that agencies need to maintain and rehabilitate. To address this problem the required traffic management efforts are beyond just the Temporary Traffic Control (TTC) plans for some projects. The key issues are safety, mobility, and accessibility.



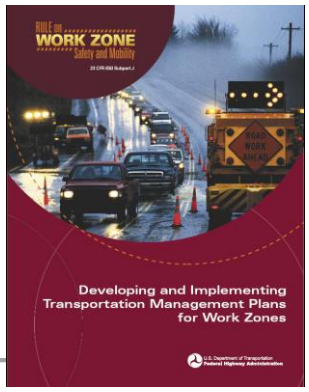
The benefits of having a well thought-out approach to managing traffic during a construction project are numerous. A good plan considers the stakeholders **(**contractors, motorists, property owners, project owners, businesses, environment, event organizers, etc.) and uses a multidisciplinary approach. It can address safety and mobility impacts of work zones at corridor and network levels. It can promote efficient and effective construction phasing and staging, minimize contract duration, and control costs. A proficient plan improves safety for workers and road users while minimizing traffic and mobility impacts of the work zone. Other benefits include the potential of minimizing the impacts of circulation, access, and mobility to local communities and businesses and minimizing complaints from road users, businesses, and communities and improvement of intra- and inter-agency coordination and public awareness.

A TMP requires using scheduling, construction strategies, contracting strategies & transportation management strategies to help improve safety, reduce traffic and mobility impacts, and promote coordination in and around the work zone at the project and corridor level

**NOTE: A TMP for some projects may just be a TTC detail or TTC plan. Only major projects will require a more comprehensive TMP.*

Who is responsible for developing and implementing the TMP?

A TMP must be developed for every Federal-aid project. The components of the TMP will vary based on the project scope. All public agencies that receive Federal-aid highway funding for projects are affected and need to implement the policies and procedures required by the federal regulations. Some local public agencies may already have their own work zone policies and procedures in place. If a local public agency uses its own policies and procedures, it is



recommended that the State and local public agency work together to ensure their policies and procedures do not conflict.

Federal Requirements

23 CFR Section 630 Part J & K of Oct 2007 requires the development and implementation of TMPs for all Federal Aid highway projects. The amount of content that is required in the plan depends on significance of the project. A significant project is one that is expected to cause a relatively high level of disruption. All projects must have a Temporary Traffic Control (TTC) Plan. For significant projects defined by DOTD's EDSM No. VI.1.1.4, TMPs must also have a Traffic Operations (TO) component and a public information and outreach (PI) component.

TMP vs. TTCP

A Temporary Traffic Control Plan (TTCP) is for handling traffic through the work zone with the use of traffic control devices.
A TMP is more comprehensive from a TTCP. It incorporates the broader issues of public awareness, mobility and safety impacts, operational concerns and stakeholder involvement. If a project is not "Significant", then the TMP can equal the TTCP.

When is a TMP Developed?

TMP development should begin during planning (Stage 0) and progress through design. Beginning a TMP analyses early in the project development process helps to ensure traffic impacts are addressed in planning and preliminary engineering, and the TMP development and implementation costs are included in the project budget. The data needed for TMP analysis is collected early in the project development. During the design phase the WZ impacts are considered in evaluating and selecting design alternatives. All alternatives considered shall be documented in the TMP. For some projects it may be possible to choose a design alternative that alleviates many WZ impacts. The assessments of the WZ impacts should affect the choice of the best construction/staging option(s), the most suitable design and contracting approach and the most appropriate WZ traffic management strategies. The provisions for implementing the TMP strategies shall be in the project's **Plans, Specifications, and Estimates** (PS&Es) or the agency will commit to implementing the TMP strategies with their own forces.

What should it include?

For all projects, the federal regulations require that the TMP include a Temporary Traffic Control (TTC) plan that addresses traffic safety and control through the work zone. If a project is expected to be **significant**, the TMP for that project must also contain both transportation operations and public information components. However, agencies are

encouraged to consider transportation operations and public information strategies for all projects. When developing a TMP, agencies should develop and implement the plan in consultation with relevant stakeholders (**e.g.**, other transportation agencies, railroad agencies/operators, transit providers, freight movers, utility suppliers, police, fire, emergency medical services, schools, business communities, and regional transportation management centers).

Implementation

Both the agency and the contractor must designate a trained person at the project level who "has the primary responsibility and sufficient authority for implementing the TMP and other safety and mobility aspects of the project". Having a responsible person from both the agency and the contractor will ensure that effective transportation management is planned, executed, and maintained. Effective management will minimize the causes for litigation. Neither party is immune from litigation. The agency's contract provisions will retain review, approval and any changes to the TMP elements.

Prospective TMP Components for Significant Projects

A significant *project is one that the agency expects will cause a relatively high level of disruption.*

- Project Description
- Existing and Future Conditions
- Work Zone Impacts Analysis and Assessment (Safety, Mobility and Accessibility)
- Work Zone Traffic Management Strategies (TTC Plan, Traffic Operations Plan, Public Information Campaign)
- TMP Monitoring Requirements
- Contingency Plans
- Implementation Costs
- Agencies <u>should</u> coordinate with appropriate **stakeholders** in developing a TMP
- Provisions for a TMP <u>shall</u> be in the project's **Plans, Specifications, and Estimates** (PS&Es)
- The LPA and the contractor <u>shall</u> each designate a **responsible person** for implementing the TMP at the project-level that is appropriately trained, has primary responsibility and has sufficient authority for implementing the TMP and other safety and mobility aspects of the project
- The plan should address the concerns of stakeholders
- The plan should use a multidisciplinary approach and define roles
- It should have a set of coordinated strategies implemented to manage the WZ impacts of a project
- The plans should be scale-able – projects with more expected impacts may need more analysis and more strategies

The scope, content and level of detail of a TMP may vary based on the work zone impacts of the project.

There are 4 levels of projects.

- *Level 1 Projects:* Projects where the required work does not affect the existing road way (i.e. mowing, clearing and grubbing, drainage.)
- *Level 2 Projects:* Projects that will affect the existing road way.
- *Level 3 Projects:* Projects that meet the Level 2 conditions and the 3 following conditions:
    - Lies on a principal arterial and
    - Has a Level of Service of F and
    - Has a lane closure during the peak travel periods
- *Level 4 Projects:* Projects that meet Level 2 conditions and the 3 following conditions:
    - On an interstate or full control of access roadway and
    - Lies inside of a Transportation Management Area (urbanized area with a population over 200,000) or has a Level of Service of F and
    - Will have lane closures

EDSM No. VI.1.1.8, **Transportation Management Plans (TMP)** (Reference Appendix D-5 for link) discusses the levels of TMPs and the actions required for each level.

To determine the type of TMP a project requires, a flowchart was developed. (Reference Appendix D-5 for link).

Project Proposal Preparation

A project proposal is required for projects let through DOTD's letting process. A proposal form is the document that the prospective Contractors submit bids both electronically and later hard copies. Proposals may be developed by DOTD depending on the program. In SRTS and LRSP, the proposals are most often developed by retainer consultants. A guide to develop a proposal can be found in the Proposal Preparation Manual.

Specifications

Specifications are the compilation of provisions and requirements for the performance of prescribed work. If technical specs are needed, the designer/consultant has to provide them. These are considered Non-Standard specifications. There may be cases when even standard specifications require a write-up. An example is the removal of _____ may require a write-up on the removal process. There is a link for standard specs/step by step directions.

The 2006 Standard Specifications or blue book is a book of specifications for general application and repetitive use. (Reference Appendix D-5 for link).

The 2006 Supplemental Specifications are additions and revisions to the Standard Specifications for items that are repetitively used that were not included in the standard specification book. (Reference Appendix D-5 for link).

The majority of the proposal is boiler-plate language. The exception is the Non-Standard Pay Items. If Non-Standard Pay Items are proposed they must be created. The LPA/consultant is responsible for writing any Non-Standard specifications. The specification must follow DOTD standard format. Brand specific items are **not** allowed. The specification must allow for approved equals and it must be formally approved by DOTD then FHWA.

The project specifications include all Standard Specifications, Supplemental Specifications, Non-Standard Items, Special Provisions and other provisions applicable to the project.

Construction Contract Time

- 30-days is the minimum allowed time
- For non-roadway projects the LPA may be required to provide construction time
- Completion of spreadsheet

Opinion of Probable Cost (Project Estimate)

The purpose of the Cost Opinion is:

- To place an expectation for the LPA to set aside sufficient money to fund the project.
- To place a reasonable expectation on the contractors for the proposed cost
- To introduce to contractors the relative magnitude of the project

The opinion of probable cost is used by DOTD to prepare the Summary of Estimated Quantities Plan Sheet. This is generated by DOTD from the opinion of probable cost; therefore, the consultant/designer no longer submits this plan sheet.

Quantities must be separated if:

- a project has different control sections (by control section)
- a project has non-participating items
- a project has multiple funding sources

Plan preparation itemizes the items of work and their quantities. The item numbers are entered into the DOTD system (AASHTO Trns.Port 2.0). When submitting the final estimate the quantity calculations are important. *DO NOT USE* "No Direct Pay" items. (There MUST BE pay items identified for each work element)

The Master Pay Items List can be found on DOTD website (reference Appendix D-5 for link) shown at the bottom under Standard Pay Items List. This list shows both existing Non-Standard Pay Items and new Non-Standard Pay Items.

When producing plan quantities, it is desirable to remove things that cause ambiguity and conflicts. This will help to get the best prices from the contractor bids. Developing a Realistic Project Budgets will expedite the bid approval process due to bid selection parameters. A realistic project budget is required to ensure compliance with Louisiana State Bid Laws. The Opinion of Probable Construction Cost is the "best guess" of the cost of the project but is not a guarantee of the actual low-bid amount.

There are two types of contract item types for construction projects; lump sum and unit price. The project cost will be based on costs of both types of items. Lump sum items vary by type of project. Lump sum items typically are the fixed costs that do not vary directly with the scope of the project. The unit price items vary by quantity (material cost). Unit price items vary directly with the amount of materials needed to complete the project due to the type of work to be performed.

The following are steps to creating an opinion of probable costs.

1. Identify all cost items based on DOTD Contract Bid Items that are typically paid for by unit price.
2. Create a Worksheet with the Following Columns:
    a. Item Description/Bid Item Number
    b. Unit of Measure
    c. Weighted Unit Price
    d. Bid Item Quantity
    e. Item Cost
3. Determine a Unit Price Subtotal for the work to be performed.
4. Locate Weighted Unit Prices for Contract Bid Items on DOTD Website (reference Appendix D-5 for link). Under: Standard Item File - Weighted Unit Price find the file: 20140707_2008 Spec Year (English))
5. Use this file to obtain the current Statewide Average Unit Price for the Unit Price Items of work to be performed.

The weighted prices that are shown in the table are based on the last quarter or the last four quarter quantities (which are provided) as well as the number of bids for that the unit price. High quantity items typically have fairly low bid prices relative to the overall market. The average quarterly unit price from this file from DOTD website will characteristically be lower than the unit price available for smaller projects with smaller quantities. Many LPA projects are relatively small and unit price is higher than for larger volume projects. A 150% adjustment is a normal rule of thumb for adjusting the unit price for a small quantity.

6. Add These Lump Sum Items to EVERY PROJECT
    a. Mobilization estimated at 5-15% of Unit Price Subtotal
    b. Temporary Signs and Barricades estimated at 5-10% of Unit Price subtotal
    c. Construction Layout estimated at 5%-10% of Unit Price Subtotal

    The selected percentage will be determined by the project size. (It is an inverse relationship)
7. Add a contingency to spreadsheet.

    The range is typically from 5-15% based on project complexity. It will depend on the LPA's familiarity with construction bids and project. The recent estimates and bid results will be very important in this determination.

Bid Award Parameters

1. All projects that fall between 25% below to 10% above the DOTD engineer's estimate will be awarded.
2. A written explanation will be required before a project can be awarded if the project is more than 25% below the engineer's estimate.
3. Projects that are above 10% of the estimate will be reviewed for the concurrence of award/rejection decision by the DOTD Bid Review Committee, and a written justification will also be required from the Responsible Charge, Project Manager and the Program Manager, for the decision submitted.

PS&E Package

Plans, Specifications & Estimate package includes all of the final plans, specifications, an up-to-date cost estimate, and the required checklists. This package is submitted to the DOTD Chief Engineer for signing.

Checklists/Submittals with PS&E Package

Plan-in-hand/Constructability/Biddability

QA/QC – There are QA/QC checklist. There is one checklist for preliminary plans and one for final plans. Both must be reviewed and signed by the engineer of record and a reviewer.

Approved Design Exception/Design Waiver Request

Notice of Intent (NOI) – The Notice of Intent (NOI) will be submitted to the Louisiana Department of Environmental Quality (LADEQ) prior to the project letting. The LPA project engineer will complete and submit the Notice of Termination (NOT) to the LADEQ after final stabilization of the site, in accordance with the terms of the permit. Use Phase I of the NPDES general permit applies, i.e., projects disturbing 5 acres or more of ground. Consult the Design Project Coordinator.

The LPA project engineer will complete and submit the Small Construction Activity Completion Report to the LADEQ by January 28th of the year following the calendar year of project acceptance and stabilization. Use Phase II of the NPDES general permit applies, i.e., projects disturbing 1 acre, but less than 5 acres of ground. Consult the Design Project Coordinator.

The use of erosion control features or methods other than those in the contract shall be as directed.

The Storm Water Pollution Prevention Plan shall be comprised of Section 204 of the standard specifications along with applicable supplemental specifications and special provisions, and Standard Plan EC-01, "Temporary Erosion Control Details."

Requirements for Letting

The following items should serve as a checklist for letting to happen:

PS&E Package Completed
Railroad Agreements (If Needed)
Environmental Clearance
Corps of Engineers Permit (If Needed)
Coast Guard Permit (If Needed)
Coast Guard Navigation Permit (If Needed)
Water Quality Certification (If Needed)
Coastal use Permit (If Needed)
Scenic Stream Permit (If Needed)
Levee Permit (If Needed)
Utilities Relocated (If Needed)
Right of Way Clearance (If Needed)
Utility Clearance (If Relocations Not Needed)

A 30-Day Advertising Window is Standard. Funding must be in place prior to letting for all reimbursable projects.

Falcon

Falcon is a file sharing software system that DOTD uses to facilitate open competition in Bidding. It is available to contractors for their use in preparing bids and communicating questions. Prospective Bidders must register. They will be placed on an interested vendor list. This provides them access to all communication regarding the project. All contractor questions must be submitted through FALCON. The Q&A procedures for each project ***MUST BE THROUGH ADDRESSED THROUGH FALCON!*** No one (the project managers, the responsible charges nor the design consultants) can answer questions about the project outside of this venue. The response to FALCON inquiries must be immediate by the Project Manager. Any information not in Falcon is not part of the contract.

Revisions, Postponements, Withdrawals

Any revision to the plans after DOTD Chief Engineer has signed final plans must be submitted approximately 3-weeks prior to letting in order for the letting date to remain as scheduled. If a project is postponed, the project is let in not more than 30 days and

does not require re-advertisement. If the project is withdrawn and re-advertise a later letting date is scheduled. Postponing and/or withdrawing/re-advertising has a detrimental effect on contractors who are trying to schedule their workload and provide the best price for the work items.

Some of the reasons that a project may require revisions is because the plans have quantity error, changes to the quantities, or items left out.

Letting

Barring any irregularities, DOTD automatically recommends awarding the contract to the lowest bidder when the bid is within 10% over or 25% under the engineer's estimate. The LPA is responsible for reviewing and providing feedback on the bid prior to any award. No negotiations are allowed with the lowest bidder to increase/decrease scope

Notice of Contract Execution & Notice to Proceed

- At this point the contract is ready to be recorded by the LPA in the local Clerk of Court's office
- The Notice to Proceed is the responsibility of the LPA
- The set up meeting and preconstruction meetings should be scheduled
- The time limit to sign the contract is 60 days.
- There is a very long list of people sent a copy of this document, but it is not all inclusive